

عنوان مقاله:

(Assessment of Two Different Sources of Durable Resistance and Susceptible Cultivar of Wheat to Stripe Rust (*Puccinia striiformis* f. sp. tritici

محل انتشار:

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خلاصه مقاله:

A study was conducted to assess the durable resistance in a near isogenic line of spring wheat (*Triticum aestivale* L.), possessing resistance gene *Yr-18* to some isolates (race specific resistance) of stripe rust (*Puccinia striiformis* f. sp. tritici), namely Thatcher *Yr-18* and durable resistance of an cultivar of spring wheat to all isolates of stripe rust (race non-specific resistance), namely Hybrid de Berse'e. In this investigation fresh urediniospores of two isolates namely SRC 99 (race *Yr-E 128*) and SRC 89 (race *Yr-E 14*), were collected from a susceptible cultivar of spring wheat, Avocet, as inoculums. Then suspension of spore in mineral oil [Soltrol 170 (5 mg/ml)] were sprayed on third and flag leaves of the booth genotypes mentioned above and on the Thatcher cultivar which was susceptible to booth isolates. The Percentage of urediniospore germination, latent period and infection types of all susceptible and resistant genotypes to booth isolates were determined in four replicates at seedling and adult plant stages. Mean percentage of spore germination and the value of latent period were analyzed separately in each replicate, and then compared using analysis of variance and the Student-Newman Keuls test. The results indicated that urediniospore germination in all genotypes / isolates/ leaf stage combination was high and neither resistance type affected spore germination significantly. In both types of resistance, latent period increased with advancing plant age. In general cultivars possessing resistant gene had longer latent periods. Assessment of the infection type showed that, the durable resistance of Hybrid de Berse'e is detected at an earlier stage than the adult-plant resistance of near isogenic line containing the gene *Yr 18*. REFERENCES Bamdadian, A. (1972) Physiological races of *Puccinia striiformis* in Iran. Proceeding of the European and Mediterranean Cereal Rust Conference. Prague, pp. 91- 95. Biffen, R. H. (1905) Mendel's laws of inheritance and wheat breeding. Journal of Agricultural Science 1, 4- 48. Biffen, R. H. (1912) Studies in inheritance in disease resistance. II. Journal of Agricultural Science 4, 412- 419. Coner, R. L. and Kuzyke, A. D. (1988) Effectiveness of different fungicides in controlling stripr, leal rust, and black point. Can. J. Plant pathology 73, 927- 936. Elahinia, S. A. (2000) Assessment of urediniospore germination of *Puccinia striiformis* at various temperature on agar and detached leaves of ... wheat. Journal of Agriculture, Science and Technology 2, 1-8. Elahinia, S. A. (1989) Resistance of Wheat to *Puccinia striiformis*

کلمات کلیدی:

Stipe rust, *Puccinia stiiiformis*, Wheat resistance

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